

PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a new traffic control signal at the intersection of US Route 40 and West Access Road Principio Business Park in Cecil County, Maryland. US Route 40 is considered to run in an east/west direction.

II. INTERSECTION OPERATION

The intersection is to operate in a NEMA three (3) phase, full-traffic-actuated mode. There will be an exclusive left turn phase for the eastbound movement of US 40. The US 40 west-bound through movements will operate alone, with advance HB. The eastbound through movement will not be stopped. The West Access Road movement will operate alone.

An eight phase, full-traffic-actuated, solid state digital controller with intersection monitor and harness, battery back-up, video detection equipment, and (1) four-channel rack mounted time delay output loop detector amplifiers housed in a base mounted cabinet are to be installed at this location.

III. SPECIAL NOTE:

- The Contractor shall notify Mr. Robert Snyder of SHA at 410-787-7635 to arrange for the phone drop installation.
- The Contractor is to provide Mr. Snyder with the nearest street number, zip code, and telephone number.

EQUIPMENT LIST

A. S.H.A. furnished equipment material.

None.

B1. Approved S.H.A. equipment to be purchased and installed by the Contractor.

All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Specification Section	Description
2	EA	818	27 ft. steel mast arm pole with a 50 ft. mast arm.
1	EA	818	27 ft. steel twin mast arm pole with 50 ft. mast arms.
1	EA	816	Standard S.H.A. traffic signal controller, base mounted cabinet, and one (1) four-channel loop detector amplifiers [Note: Controller and cabinet shall be purchased from Econolite and delivered to the S.H.A. signal shop for wiring and testing. Contact Mr. Ed Rodenhizer (410) 787-7650].
1	EA	814	12 in., one-way, three section (R,Y,G,A) adjustable black faced L.E.D. traffic signal head with pole mounting hardware and tunnel visors.
6	EA	814	12 in., one-way, three section (R,Y,G) adjustable black faced L.E.D. traffic signal head with mast arm mounting hardware and tunnel visors.
2	EA	814	12 in., one-way, one section (Y) adjustable black faced L.E.D. traffic signal head with mast arm mounting hardware and tunnel visors.
2	EA	---	Video Detection Camera and Cable. (2 - 300 LF.)
1	EA	813	30 in. x 36 in. R 3-5(L) sign with mast arm mounting hardware.
1	EA	813	120 in. x 60 in. W 3-3(2) sign with mast arm mounting hardware.
1	EA	813	72 in. x 24 in. M-95-1 sign with mast arm mounting hardware.
2	EA	813	48 in. x 48 in. W 3-3 "NEW" sign for ground mounting.
2	EA	813	18 in. x 24 in. R 4-7(R) sign for ground mounting.
3	EA	813	18 in. x 18 in. OM-1(1) sign for ground mounting.
2	EA	---	Non-invasive probe (set of 3) with 750 ft. lead-in cable.
2	EA	806	15 ft. luminaire arm.
2	EA	806	250 W H.P.S. lamp and luminaire.
1	EA	---	Cut, clean, galvanize and cap signal structure.

C. SHA forces shall remove the controller and all auxiliary equipment from the controller cabinet.

The cabinet and all other materials to be removed by the contractor shall become the property of the contractor.

None.

CONTACT LIST

The contact persons for District #2 are as follows:

Mr. Robert Kiel
Assistant District Engineer - Traffic
410-810-3240

Mr. Barry Clothier
Assistant District Engineer - Utility
410-778-3081

Mr. Terry O. Wright
Assistant District Engineer - Maintenance
410-778-3081

Mr. Robert Snyder
Assistant Chief - Traffic Operations
410-787-7635

Mr. Edward Rodenhizer
Assistant District Engineer - Signal Operations
410-787-7650

Mr. Richard L. Doff
Chief, Traffic Operations Division
410-787-7630

The Power Company Representative is:
Connectiv
Juan Owono
410-287-7176
2 Center Dr.
N.E., MD 21901

B2. Equipment to be furnished and/or installed by the Contractor.

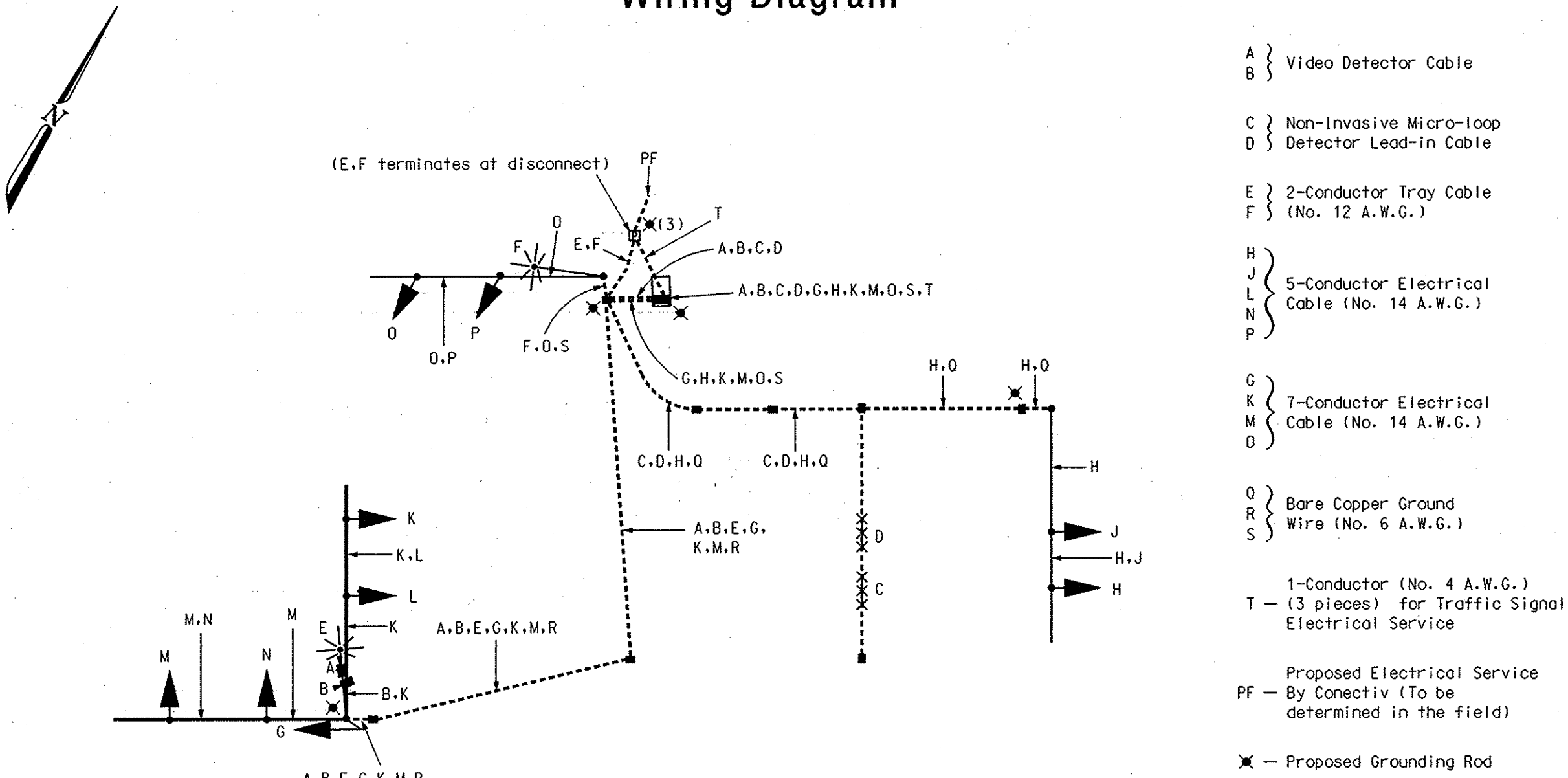
All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
3	CY	205	Test pit excavation.
8	EA	811	Handhole.
280	LF	810	2-conductor electrical tray cable (No. 12 A.W.G.).
700	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
60	LF	804	1-Conductor (No. 4 A.W.G.) electrical cable.
690	LF	805	Bare copper stranded ground wire (No. 6 A.W.G.).
500	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
55	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
10	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
160	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
12	CY	801	Concrete foundation for traffic signal equipment.
7	EA	804	Ground rod - 3/4 in. diameter x 10 ft. length.
1	EA	807	Underground electrical service (120/240 V, one phase, three wire system) with metered service pedestal per MD-SHA Typical 807.05-01.
80	EA	549	24 in. wide HAPPTM - white for stop line.
134	LF	812	4 in. x 4 in. wood sign support.
Lump Sum	LS	---	As-built for S.H.A. [on CADD].
20	LF	805	2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
800	LF	810	7-conductor electrical cable (No. 14 A.W.G.).

Phase Chart

	1	2	3	4	5	6	7	8	9
	(Y)	(Y)	(R) (Y) (B)	(R) (Y) (B)	(R) (Y) (B)	(R) (Y) (B)	(R) (Y) (B)	(R) (Y) (B)	(R) (Y) (B)
Phase 1	FL/Y	FL/Y	R	R	R	R	←G—	G	G
1 Change	FL/Y	FL/Y	R	R	R	R	←Y—	Y	Y
Phase 2	DARK	DARK	G	G	R	R	←R—	R	R
2 Change	FL/Y	FL/Y	Y	Y	R	R	←R—	R	R
Phase 4	FL/Y	FL/Y	R	R	G	G	←R—	R	R
4 Change	FL/Y	FL/Y	R	R	Y	Y	←R—	R	R
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R

Wiring Diagram



STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION
(General Information Plan)

US 40 at West Access Road (Principio Business Park)
Perryville, Maryland

DRAWN BY: F. Brownley	F.A.P. NO. N/A	TS NO. 4326	SHEET NO. 2 OF 2
CHECKED BY: N/A	S.H.A. NO. BW996M82	T.I.M.S. NO. G-411	
SCALE: N/A	COUNTY: Cecil	LOG MILE: 07004003.42	
DATE: May 4, 2006			